

Research Transformation through Multi-Paradigm Methodology Training for Undergraduate Accounting Students

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Abstract. *The exploration of scientific disciplines is not only monodisciplinary but has developed into transdisciplinary, even multidisciplinary. Faculty of Economics and Business Universitas Brawijaya is a producer of scientific research, but unfortunately undergraduate students still have limitations related to multi-paradigm research methodology. The implementation of this Multiparadigm Methodology Training activity aims to provide an understanding of alternative methodologies in research using qualitative methods for accounting undergraduate students. The main focus is to increase students' understanding and awareness of Multiparadigm Research Methodology. the techniques used in this PKM activity are pre-test, material presentation, post-test, and question and answer discussion. The method for assessing the success of this activity uses different tests from the pretest and post-test results. The data results will be tested using a paired sample t test with the object of this PKM research, namely undergraduate accounting students of FEB Universitas Brawijaya who attended the activity. The results of the t-test show that (1) descriptive analysis of the average value shows an increase from 59.2 to 94.1; (2) The statistical test results show that there is a significant difference between the pre-test and post-test, which indicates that there is a significant effect after the treatment. The statistical test results confirm that there is a significant effect on the participants' scores before and after receiving the treatment, as well as a significant increase in the participants' average scores, which shows that the exposure to the materials provided is quite effective in improving their understanding in Qualitative Methods Training. The implication of this research is that participants have a broader insight into muti-paradigm methodology and can apply it in research.*

Keywords: *Research Methodology Services, Qualitative Methodology, Multiparadigm Methodology, Research Training Services, Student Research Methodology*

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INTRODUCTION

Brawijaya University, especially in the accounting study program, Faculty of Economics and Business has an advantage with special characteristics through a multiparadigm approach-developing multiparadigm methodologies in various domains to improve the framework of thinking in research. Science has shifted from a dichotomous paradigm to an integrative-interconnected paradigm, using a student-centered approach that focuses on problem-solving, spiritual-scientific, and philosophical-normative aspects. This includes strategies such as direct instruction, contextualized teaching, problem-based learning, and meaningful learning, with evaluation that goes beyond cognitive aspects to include affective and psychomotor dimensions through observation and self-assessment techniques (Chanifah, 2020).

Students as part of academia, in addition to focusing on the fulfillment of courses, are also required to carry out research as a final project in the context of carrying out academic activities. One of the most important things is the research methodology of academic and professional development for students in various disciplines, including science, engineering, management, social sciences, and healthcare. Research methodology provides a structured approach to discovering, interpreting, and modifying human knowledge, which is fundamental to the advancement of disciplines (Anand, 2024; Prabhavathy et al., 2024). The National Education Policy (NEP-2020) emphasizes the need for research reforms and integration of research methodologies into the curriculum to bridge the gap between theory and practice, thus promoting a more holistic educational experience (Desai, 2024). The choice of research methodology is one of the important things in the process of conducting research (Talib, 2022). Through research, students can develop the ability to think critically, analytically, and systematically in solving problems related to the field of science they study (Wiraguna et al., 2024) (Wiraguna et al., 2024). Research methods with a multiparadigm approach have their own diversity and uniqueness, some of which are taught including positivistic methods, and non-positivist methods consisting of interpretative, critical, postmodern, religious, spiritual and divine.

Non-positivist research methodology or more *familiar* with qualitative, is a research approach where the researcher uses the basis of verbal rationalism to find answers to the research he conducts. Qualitative research methodology is specifically discussed more at the Masters and Doctoral levels, in contrast to the case of Accounting undergraduate students, who are more familiar with descriptive quantitative research and are much more familiar with using quantitative methodology with statistical tools to process research data. This is also due to the fact that they have been presented with numbers in financial statements every day, but understanding qualitative research methodology is often a challenge for Accounting undergraduate students. Most students are more familiar with quantitative research methods that are more structured and number-based. Therefore, efforts are needed to improve students' understanding and skills in using qualitative research methodology (Assyakurrohim et al., 2022).

The importance of multi-paradigm research methodology lies in its ability to provide a comprehensive and nuanced understanding of complex phenomena by integrating diverse perspectives and methodologies. This approach allows researchers to go beyond the limitations of single paradigm studies, offering richer insights and stronger conclusions. Some of the main reasons why multi-paradigm research is so important, first is that multi-paradigm research enables the integration of multiple perspectives, leading to a more comprehensive understanding of the research subject. For example, in consumer research, combining different methods has been shown to yield nuanced insights into complex consumer behaviors and needs, which are often overlooked in Single method studies (Scheufele, 2023) In addition, in organizational studies, multi-paradigmatic approaches encourage and view organizations through different lenses, thus avoiding reductionist views and encouraging the development of new perspectives (Amboni et al., 2017). Secondly, methodological flexibility and synergy i.e. the use of multiple paradigms enables methodological flexibility, allowing researchers to choose the most appropriate Methodology for their specific research questions. This flexibility is particularly beneficial where different paradigms can illuminate different aspects of power dynamics in human interactions (Gretschel et al., 2023). Third, it addresses complex and transnational issues. Multi-paradigm methodologies are essential for addressing complex transnational issues, as they allow researchers to incorporate diverse cultural and contextual perspectives. For example, multi-sited research has improved understanding of women's human rights activism by integrating local and global perspectives (Jokela-Pansini, 2019). In social life cycle assessment, recognizing the multiparadigmatic nature of social science helps in understanding the diverse methodological approaches and underlying paradigms, which is crucial for addressing complex social phenomena (Iofrida et al., 2018).

The Role of Qualitative Research in Higher Education

Qualitative research methodology has a long tradition in the social sciences and humanities, offering diverse perspectives on theoretical foundations and research strategies. The methodology is essential for understanding complex social phenomena and is increasingly being integrated into higher education research to address multifaceted global challenges (Gomez, 2016). In professional practice, qualitative methodologies are essential for exploring the intricacies of skill development. They provide insights into the "how" and "why" of professional judgment, making them indispensable for understanding real-world context and unexpected findings (Yardley et al., 2016; Yardley et al., 2019).

Demand for Qualitative Skills in Professional Practice

The need for qualitative research methodologies is increasingly prominent, not only as a complement, but also to provide strong and important arguments for a phenomenon or research problem. The traditional dominance of quantitative methodology in fields such as business and management underscores the need for a broader and more complex approach than just descriptive narratives in qualitative research. Expanding and encouraging academics, including students of the Faculty of Accounting at Brawijaya to champion qualitative methods in their research. This can help bridge the gap between academic and practical applications, fostering a more holistic understanding of complex issues (Cole et al., 2011). Methodological training in accounting education is essential to equip students with the necessary skills to navigate the evolving landscape of the accounting profession. It integrates traditional and multidisciplinary teaching methodologies to foster thinking skills and address the complex needs of qualitative research questions.

The identification of gaps in research practice, especially in qualitative methodological training at the undergraduate level, is crucial to moving the field forward. Current literature highlights several shortcomings in research and educational practice, emphasizing the need for stronger methodologies and better integration of research findings into the research world. Some of the current research methodology gaps include qualitative methodological training at the undergraduate level, there is a notable lack of training students in qualitative research methodologies. This gap limits students' ability to think more complexly and engage in comprehensive research and critically analyze qualitative data, which is essential for addressing research problems. The lack of adequate training in qualitative methodology also contributes to the narrow research-practice gap, as students are not equipped with sufficient knowledge.

This activity is carried out to address the gaps that occur and it is important to recognize the challenges inherent in bridging the gap in qualitative research that is still simple. The complexity and dynamics of qualitative research with interdisciplinary involvement and diverse stakeholder needs require continuous adaptation and re-evaluation of research practices to remain relevant and effective. Based on the facts described above, the service team of the Department of Accounting, Faculty of Economics, Universitas Brawijaya provided training and mentoring for undergraduate students. This activity was implemented as a form of support from experts and institutions of Universitas Brawijaya to further enhance the understanding and skills of undergraduate students. we proposed a solution to the problem shown in Figure 1.

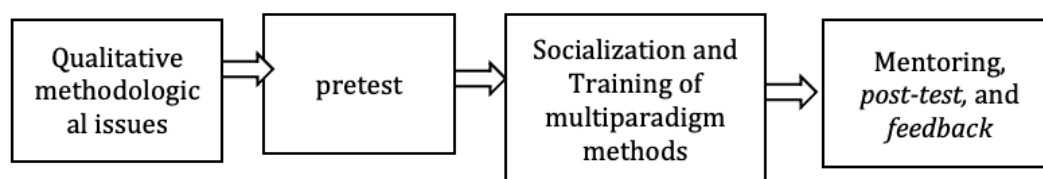


Figure 1. Problem-solving solution framework

Community Service activities (PKM) have a focus and aim on Multiparadigm Qualitative Methodology Training to provide an in-depth understanding of qualitative research to

Accounting undergraduate students and as a reference for them in choosing a research methodology for their thesis or further research development. This is very important to broaden the horizons of the framework of thinking and research problem solving techniques with a specific and directed qualitative approach. The success of this activity also aims to see the extent of student understanding before and after receiving training materials. In this training, the methods used include pre-test, material presentation, discussion, and post-test. With this comprehensive approach, it is hoped that students can better understand the concept and application of qualitative research methodology.

Community Service is also a form of Tridarma Perguruan Tinggi This program aims to support sustainability goals, namely SDG 4 (Kusdiantini et al., 2023). *Quality Education*, this training is later expected to make undergraduate Accounting students understand the rules and understanding of Qualitative Research Methodology. The results of this research are also a form of support for students who are taking their final project in developing their knowledge to achieve achievements.

METHODS

The target of this training is all undergraduate students of the Faculty of Economics and Business, especially the Accounting Study Program, Universitas Brawijaya. The selection of this population is based on the needs and roadmap of the accounting department of the Faculty of Economics and Business, Universitas Brawijaya, which favors multiparadigm research. This activity is carried out in a *hybrid* manner, namely offline and online, located at the FEB UB Main Building 3rd Floor and through the Zoom meeting; the implementation time is Wednesday, July 11, 2024. The implementation of this activity was carried out in three stages, namely: (a) Preparation Stage. At this stage, an initial survey is carried out, determining the material and presenters, determining the location and target participants of the activity, distributing registration links to prospective participants and preparing materials; (2) Stages of Community Service Implementation. At this stage, a socialization will be held where the speaker will explain about research methodology in qualitative form. In this session, it is hoped that the participants will receive the material well and can be applied later; (3) Training Phase. At this stage, several training methodologies were required to carry out the activities, namely: a) Pre-test method; b) Material delivery methods consisting of interpretive research methodology, critical research methodology, postmodern research methodology, religious research methodology and spiritual and divine research methodology; c) Discussion Method; d) Carry out post test

Table 1. List of Socialization Activities of multi-paradigm qualitative research methodology

Session 1	
Activities	- Opening and Pretest
Destination	- Introduces the overview and importance of multi-paradigm qualitative research methodology. - Measuring the level of understanding of participants before socialization and mentoring
Session 2	
Activities	- Explanation of multiparadigm qualitative research methodology material
Destination	- Able to provide knowledge to participants about the types of multiparadigm qualitative research methodologies.
Session 3	
Activities	- Discussion and question and answer
Destination	- This activity aims to make the socialization run in two directions, namely the speaker delivering and participants asking questions so that participants can better understand the material presented.
Session 4	
Activities	- Post test - Closing

Destination	<ul style="list-style-type: none"> - Measuring the level of understanding that participants have about research using qualitative methodology before and after the socialization. Provide input, shortcomings and feedback on partner needs in the next period. - Thank you to the participants of the socialization.
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Four methods were used to implement the training provided by the presenters First, a pre-test. This method was given with the aim of measuring participants' understanding of qualitative research methodology. Second, material delivery. This method is given with the aim of informing participants about the meaning, characteristics, steps of conducting research with qualitative methodology, data collection methods, data presentation, proposal format, and how to determine qualitative research topics. Third, discussion. This method is given with the aim that the socialization runs in two directions, namely the speaker conveys and the participants ask questions so that the participants can better understand the material presented. Fourth, post test. This method is given with the aim of measuring the level of understanding possessed by participants regarding research using qualitative methodology before and after the implementation of socialization (Thalib, 2022).

RESULTS AND DISCUSSION

The activity speaker team was Professor Iwan Triyuwono, SE, Ak, M.Ec, Ph.D as the presenter of the Multiparadigm research methodology, and Dr. Lilik Purwanti as the presenter of the importance of qualitative research methodology, as well as the accompanying team and the implementation of pretest and post test socialization. The material presented in the socialization includes a pretest to measure the initial knowledge of participants, the importance of qualitative research, the delivery of multi-paradigm material consisting of interpretative, critical, postmodern, religious, spiritual and divine paradigms, and the delivery of post tests.

The importance of the t-test and significance score improvement test lies in its ability to accurately measure and interpret changes or differences in data, which is crucial in a variety of fields. These tests help reduce variability and increase the power of statistical analysis. Reliability and assumptions about the distribution of the data are very important, among other things, it serves as Strength and Reliability, i.e. the difference score is strong in significance testing because it reduces the variance of the true score (May & Hittner, 2003). In controlled repeated measurements, simple difference tests can provide superior power, especially in the presence of certain correlation structures, such as highly autoregressive ones (Overall & Tonidandel, 2003; Overall & Tonidandel, 2010). Second, increased significance scores. Powerful statistical methods such as Z-Score and F tests are used to determine the significance of different test methods, highlighting the importance of statistical analysis in verifying test results (Gao et al., 2017).

The results and discussion of Community Service Activities through Qualitative Methodology Research for Undergraduate Accounting Students are based on evaluation and data analysis of participants' pre-test and post-test works. The following are the results and discussions that we have evaluated and analyzed. The *pretest* results on undergraduate accounting students in this qualitative methodology training before receiving socialization and training can be seen in the table below:

Table 2. Descriptive Analysis Results

Paired Samples Statistics				
	Mean	N	Std. Deviation	Std. Error Mean
Pre Test	59.2308	65	25.08160	3.11099
Post Test	94.1538	65	11.16528	1.38488

Based on the difference in mean scores between the pre-test and post-test, it can be seen that the mean score increased significantly from 59.23 to 94.15. It can also be seen that the standard deviations are 25.08 and 11.16, out of a total sample of 65 people.

Table 3. Paired Samples t-test results

Pair 1	Paired differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pre Test – Post Test	-34.92308	24.11710	2.99136	-40.89900	-28.94715	-11.675	64	.000

The data displayed in table 3 above, shows that there is an increase in scores indicated by a value of -34.92, which is the difference between the *average* pre-test and post-test results. With a standard deviation value of 24.11, a significance value of $0.000 < 0.05$ (Alpha) was also obtained, indicating a significant difference between the pre-test and post-test. This also indicates a significant effect on the difference in *treatment* given for each variable.

Through the results and discussions that have been carried out comprehensively, the Qualitative Research Methodology Training Activities that have been held provide new knowledge about qualitative research methodology for Accounting undergraduate students as seen from the increase in the pre-test and post-test scores of participants, from 59.23 to 94.15. This means that the socialization and mentoring of qualitative research methodology of multi-paradigm has provided knowledge and succeeded as planned with an increase in the post-test scores of the participants. These results are consistent with some previous research. Through this activity can improve research skills. Training in qualitative research methodology has been shown to increase the confidence and ability of researchers to conduct independent studies. Qualitative research training improves attitudes towards research and increases emotional engagement with participants, although challenges such as time management and interdisciplinary dynamics remain (Ghirotto et al., 2020).



Mesin ilmiah multiparadigma

1. Paradigma positivis (*positivist paradigm*)
2. Paradigma interpretivis (*interpretivist paradigm*)
3. Paradigma kritis (*critical paradigm*)
4. Paradigma posmodernis (*postmodernist paradigm*)
5. Paradigma religonis (*religionist paradigm*)
6. Paradigma spiritualis (*spiritualist paradigm*)
7. Paradigma ilahi (*divine paradigm*)



Figure 2. Qualitative paradigm material display



Figure 3. Photo Session with Participants



Figure 4. Presenter Presents the Material



Figure 5. Discussion Session



Figure 6. Participants taking the Post-test

CONCLUSION

Community Service activities by the Faculty of Economics and Business, Universitas Brawijaya have been carried out well on Wednesday, July 11, 2024 online and offline through the Zoom Meeting platform. Participants in this activity consisted of 29 undergraduate Accounting students offline and 59 undergraduate Accounting students online. The lecturer as the speaker delivered material on qualitative research methodology. Based on the results of training activities and analysis of pre-test and post-test data conducted, it shows that the participants, namely undergraduate accounting students, have been able to understand the basic concepts of research using qualitative methods, where the participants' post-test results have increased from the participants' previous pre-test results. In addition, undergraduate accounting students are also able to apply qualitative methods in the research they will conduct. Multi-paradigm research methodologies offer significant advantages, they also present challenges, and the benefits of a multi-paradigm approach in providing a richer and more comprehensive understanding of complex issues make it a fairly complete tool in contemporary research. Qualitative research methodology training has significant practical implications for students with the aim of improving researcher skills and the quality of research outputs. The insights gained from such training can be applied to accounting contexts and with diverse disciplines, fostering a deeper understanding of complex issues and enhancing research practice in a dynamic and comprehensive manner. While qualitative Methodology research training offers many benefits, it also presents challenges such as integrating this Methodology into existing curricula and managing interdisciplinary dynamics. Overcoming these challenges requires ongoing support and adaptation of training programs to meet different research needs. Thus, the potential of multiparadigm methodology qualitative research to enrich various disciplines can be fully realized.

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